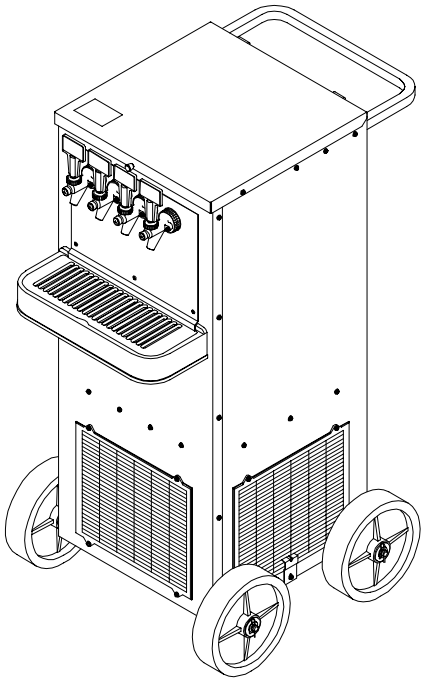
IMI CORNELIUS INC ■ One Cornelius Place ■ Anoka, MN 55303-6234

Telephone (800) 238-3600 Facsimile (612) 422-3246

Installation Manual
UNIVERSAL C-750 PRE-MIX DISPENSER



Part No. 185211000
January 25, 1984
Revised: January 13, 1999
Control Code A

THIS DOCUMENT CONTAINS IMPORTANT INFORMATION
This Manual must be read and understood before installing or operating this equipment

© IMI CORNELIUS INC; 1984–99

PRINTED IN U.S.A

TABLE OF CONTENTS

	Page
SAFETY INFORMATION	**1**
RECOGNIZE SAFETY INFORMATION	1
UNDERSTAND SIGNAL WORDS	1
FOLLOW SAFETY INSTRUCTIONS	1
CO2 (CARBON DIOXIDE) WARNING	1
SHIPPING, STORING, OR RELOCATING UNIT	1
GENERAL INFORMATION	**3**
GENERAL DESCRIPTION	3
UNIT DESCRIPTION	3
THEORY OF OPERATION	4
INSTALLATION	**7**
UNPACKING AND INSPECTION	7
INSTALLING HANDLE ON UNIT	7
SELECTING LOCATION	8
ELECTRICAL REQUIREMENTS	8
LOCATING THE UNIT	8
DRAIN CONNECTIONS	9
FILL WATER TANK AND START REFRIGERATION SYSTEM	9
INSTALLING PRODUCT TANKS QUICK DISCONNECTS ON UNIT PRODUCT INLET LINES	10
INSTALLING PRIMARY CO2 REGULATOR ASS'Y AND CONNECTING PRODUCT TANKS CO2 LINES TO REGULATOR	10
INSTALLING DISPENSING VALVE KNOBS	10
INSTALLING DISPENSING VALVE DECAL KIT	10
INSTALLING 5-INCH PLAQUES ON SIDES OF UNIT	10
INSTALLING DRIP TRAY AND CUP REST ON UNIT	11
PREPARING UNIT FOR OPERATION	11
UNIT OPERATION	11
OPERATORS INSTRUCTIONS	**13**
PREPARING UNIT FOR SHIPPING OR RELOCATING	13
OPERATING CONTROLS	13
DISPENSING VALVE LEVER	13
UNIT POWER SWITCH (115 VAC, 60 HZ UNITS ONLY)	13
DAILY PRE-OPERATION CHECK	13
UNIT OPERATION	13
ADJUSTMENTS	14
ADJUSTING PRODUCT TANKS PRIMARY CO2 REGULATOR	14
ADJUSTING DISPENSING VALVES PRODUCT FLOW RATE	14
REPLENISHING CO2 SUPPLY	14
REPLENISHING PRODUCT SUPPLY	14
CLEANING AND SANITIZING	14
DAILY CLEANING OF UNIT	14
SANITIZING UNIT	14

TABLE OF CONTENTS (cont'd)

Page

CHECKING DROP-IN REFRIGERATION ASSEMBLY CONDENSER COIL FOR RESTRICTIONS 14
CHECKING ICE WATER BATH 15
CLEANING CO2 GAS CHECK VALVES 15
SERVICE AND MAINTENANCE 16
PREPARING UNIT FOR SHIPPING, RELOCATING, OR STORING 16
TOP COVER, ACCESS GRILLES, AND DRIP TRAY REMOVAL 16
OPENING HINGED TOP COVER 16
ACCESS GRILLE REMOVAL 16
DRIP TRAY REMOVAL 16
PERIODIC INSPECTION 16
ADJUSTMENTS 17
ADJUSTING PRODUCT TANKS PRIMARY CO2 REGULATOR 17
ADJUSTING DISPENSING VALVES PRODUCT FLOW RATE 17
REPLENISHING CO2 SUPPLY 17
REPLENISHING PRODUCT SUPPLY 18
PRODUCT FLAVOR CHANGE 18
CLEANING REFRIGERATION SYSTEM CONDENSER COIL 18
CHECKING ICE WATER BATH 18
CLEANING WATER TANK 20
CLEANING 21
DAILY CLEANING OF UNIT 21
DAILY CLEANING OF DRIP TRAY 21
CLEANING AND SANITIZING 22
DAILY CLEANING OF UNIT 22
SANITIZING PRE-MIX SYSTEMS 22
CLEANING CO2 GAS CHECK VALVES 23
TROUBLESHOOTING 25
TROUBLESHOOTING PRODUCT SYSTEM 25
NO PRODUCT DISPENSED. 25
DISPENSED PRODUCT COMES OUT OF DISPENSING VALVE CLEAR BUT FOAMS IN CUP OR GLASS. 25
DISPENSED PRODUCT FOAMS AS IT LEAVES DISPENSING VALVE. 25
TROUBLESHOOTING REFRIGERATION SYSTEM 26
COMPRESSOR DOES NOT OPERATE. 26
COMPRESSOR WILL NOT STOP AFTER SUFFICIENT ICE BANK IS FORMED.. 26
COMPRESSOR OPERATES CONTINUOUSLY BUT DOES NOT FORM SUFFICIENT ICE BANK. 26
CONDENSER FAN MOTOR NOT OPERATING. 26
CONDENSER FAN MOTOR NOT OPERATING. (CONT'D) 27
AGITATOR MOTOR NOT OPERATING. 27
WARRANTY 28

TABLE OF CONTENTS (cont'd)

Page

LIST OF FIGURES

FIGURE 1. UNIVERSAL C-750 DISPENSER (FOUR-FLAVOR UNIT) 3
FIGURE 2. FLOW DIAGRAM (FIVE-FLAVOR UNIT SHOWN) 5
FIGURE 3. PARTS IDENTIFICATION (FOUR-FLAVOR UNIT SHOWN) 19
FIGURE 4. WATER TANK (FOUR-FLAVOR UNIT SHOWN) 21
FIGURE 5. CO2 GAS CHECK VALVE 23
FIGURE 6. WIRING DIAGRAM 24

LIST OF TABLES

TABLE 1. DESIGN DATA 4
TABLE 2. LOOSE-SHIPPED PARTS 7

SAFETY INFORMATION

Recognize Safety Information

This is the safety-alert symbol. When you see this symbol on our machine or in this manual, be alert to the potentially of personal injury.

Follow recommended precautions and safe operating practices.

Understand Signal Words

A signal word - ***DANGER, WARNING,*** *OR* ***CAUTION*** is used with the safety-alert symbol. ***DANGER*** identifies the most serious hazards.

Safety signs with signal word ***DANGER*** or ***WARNING*** are typically near specific hazards.

General precautions are listed on ***CAUTION*** safety signs. ***CAUTION*** also calls attention to safety messages in this manual.

Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Learn how to operate the machine and how to use the controls properly. Do not let anyone operate the machine without instructions. Keep your machine in proper working condition. Unauthorized modifications to the machine may impair function and/or safety and affect the machine life.

CO_2 (Carbon Dioxide) Warning

CO_2 Displaces Oxygen. Strict Attention *must* be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

Shipping, Storing, Or Relocating Unit

CAUTION: Before shipping, storing, or relocating this Unit, the syrup systems must be sanitized and all sanitizing solution *must* be purged from the syrup systems. All water *must* also be purged from the plain and carbonated water systems. A freezing ambient temperature will cause residual water remaining inside the Unit to freeze resulting in damage to internal components of the Unit.

THIS PAGE LEFT BLANK INTENTIONALLY

GENERAL INFORMATION

IMPORTANT: To the user of this manual – This manual is a guide for installing, operating, and maintaining this equipment. Refer to Table of Contents for page location of detailed information pertaining to questions that arise during installation, operation, service and maintenance, or troubleshooting this equipment.

GENERAL DESCRIPTION

This section gives the description, installation requirements, theory of operation, design data, and flow diagram for the Universal C-750 Four and Five-Flavor Pre-Mix Dispensers (hereafter referred to as Units).

This Unit must be installed and serviced by a qualified Service Person. This Unit contains no User serviceable parts.

UNIT DESCRIPTION

The Universal C-750 Units are equipped with four eight-inch diameter wheels and a handle (see Figure 1) enabling the Units to be mobile (moved from one location to another). A Water Tank Seal Kit (P/N 308979000) is available for these Units which closes off the top of the water tank to eliminate or reduce water loss caused by splashing during mobile movement of the Unit.

Installation of LOOSE-SHIPPED PARTS, connection to a grounded electrical outlet with proper electrical requirements, filling water tank with water, and connection to product tanks with regulated CO_2 gas pressure is all that is required to prepare the Unit for operation.

CAUTION: Before shipping, relocating, or storing the Unit, all product coils *must* be sanitized and all sanitizing solution *must* be purged from the coils. Ice bank *must* be melted and all water drained from the water tank. A freezing ambient environment will cause residual water remaining inside the Unit to freeze resulting in damage to internal components.

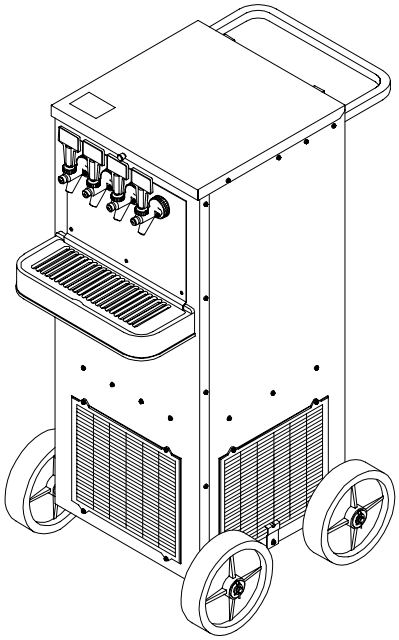


FIGURE 1. UNIVERSAL C-750 DISPENSER (FOUR-FLAVOR UNIT)

Table 1. Design Data	
Part Numbers:	
Universal C-750 Four-Flavor	2849949XXX
Universal C-750 Five-Flavor	2849959XXX
Universal C-750 Five-Flavor	4949959XXX
Overall Dimensions:	
Width	16-inches
Depth (with drip tray)	22-inches
Height	37-1/4 inches
Weights: (approximate)	
Shipping (one carton)	159-pounds
Dry Weight	140-pounds
With Water Tank Full of Water	225-pounds
Ice Bank Weight	40-pounds
Capacities:	
Unit Water Bath (no ice bank) approximate	10-gallons
Dispensing Rate:	
12-oz. drinks @ 2/minute	*496
12-oz. drinks @ 3/minute	*450
12-oz. drinks @ 4/minute	*400
NOTE: Number of 12-oz. drinks that can be dispensed at 40° F or below 75° F product inlet temperature and 75° F ambient.	
Refrigerant Requirement	See Unit Nameplate
Ambient Operating Temperature	40° F to 100 ° F
Electrical Requirements:	
Operating Voltage	See Unit Nameplate
Current Draw	See Unit Nameplate

THEORY OF OPERATION

(see Figure 2)

A CO_2 cylinder delivers carbon dioxide (CO_2) gas through adjustable CO_2 regulators to the product tanks. When dispensing valve is opened, CO_2 pressure exerted upon the product tank contents pushes product from the tanks, through the Unit cooling coils, and on to the dispensing valves resulting in cold drinks being dispensed.

When Unit power cord has been plugged into electrical outlet and the main power switch (115 VAC, 60 Hz Units only) on back of Unit has been placed in the “ON” (up) position, the compressor, condenser fan motor, and agitator motor will start and begin forming an ice bank. When full ice bank has been formed, the compressor and condenser fan motor will stop but the agitator motor will continue to operate circulating ice water bath in the water tank. The water tank ice bank sensing bulb will cycle compressor and condenser fan motor on and off as required to maintain a full ice bank.

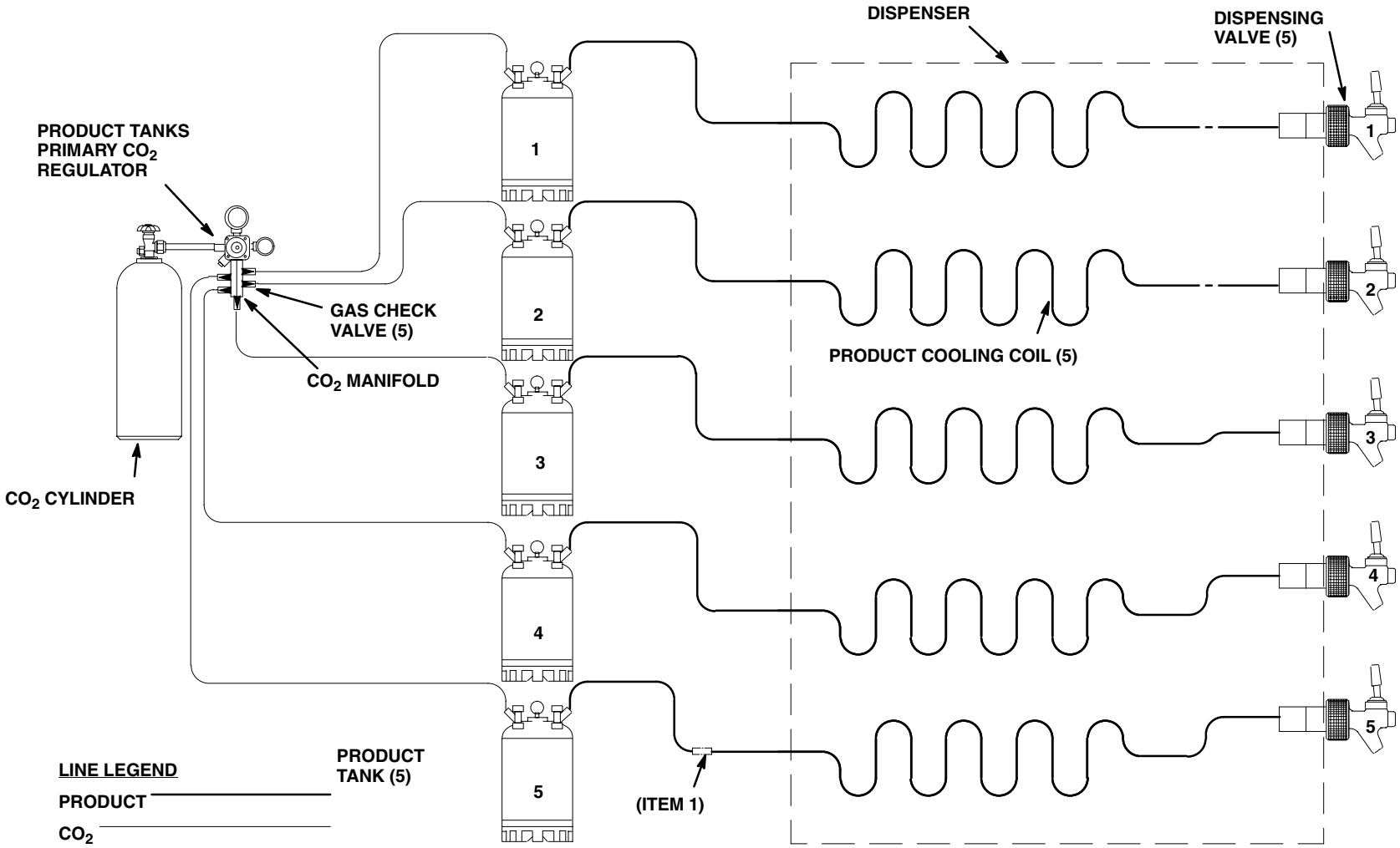


FIGURE 2. FLOW DIAGRAM (FIVE-FLAVOR UNIT SHOWN)

THIS PAGE LEFT BLANK INTENTIONALLY

INSTALLATION

This section covers unpacking and inspection, identification of LOOSE-SHIPPED PARTS, selecting location, installing Unit, preparing Unit for operation, and Unit operation.

UNPACKING AND INSPECTION

(see Figure NO TAG)

NOTE: The Unit was thoroughly inspected before leaving the factory and the carrier has accepted and signed for it. Any damage or irregularities should be noted at time of delivery (or not later than 15-days from date of delivery) and immediately reported to the delivering carrier. Request a written inspection report from Claims Inspector to substantiate any necessary claim. File claim with the delivering carrier, not with IMI Cornelius Inc.

1. After Unit has been removed from shipping carton, remove shipping tape and other packing material. Inspect for shipping damage and follow procedure in preceding **NOTE** if damage is evident.

2. Unpack LOOSE-SHIPPED PARTS. Make sure all items listed in Table 2 are present and in good condition.

Table 2. Loose-Shipped Parts

Item No.	Part No.	Name	Qty. 4fl	Qty. 5fl
1	176193000	Adapter Fitting 7/16 X20 (2) see **Note 1**	4	5
2	151741039	Knob, Dispensing Valve (see **Note 2**)	4	5
3	186573039	Drip Tray	1	1
4	186642000	Cup Rest	1	1
5	151664702	Plaque, 5-inch (see **Note 2**)	2	2
	151664714	Plaque, 5-inch (see **Note 3**)	2	2
6	317904702	Decal Kit, Dispensing Valves Knobs (see **Note 4**)	1	1
6	317904714	Decal Kit, Dispensing Valves Knobs (see **Note 5**)	1	1
6	317904720	Decal Kit, Dispensing Valves Knobs (see **Note 6**)	1	1
7	319941000	Screw, Thread Rolling, Hex Washer Hd, No. 8-32 by 3/8 in. Long	4	4

Note 1: Models 2849949020, 2849949690, 2849959020, 2849959690, and 4949959020.

Note 2: Models 2849949020 and 2849959020.

Note 3: Models 2849949690, 2849959690, and 4949959020.

Note 4: Models 2849949020 and 2849959020.

Note 5: Models 2949949690 and 2849959690.

Note 6: Models 2849949200, 2849959200, and 4949959200.

INSTALLING HANDLE ON UNIT

The Unit (see Figure 1) was shipped from the Factory with the handle pushed into the cabinet and temporarily fastened with two screws. Proceed as follows to properly position and permanently fasten the handle to the Unit.

1. Pull release latch on front of the top cover, then lift hinged cover up into open position.

2. Remove two screws (one on each side of Unit) securing the handle.
3. Pull handle far enough out of the cabinet to align holes in the handle (three holes on each side) with mating holes in cabinet side panels.
4. Using the two screws removed in preceding step 2, temporarily fasten each side of the handle to the cabinet side panels.
5. Using four SCREWS (item 7), complete fastening handle to the cabinet side panels.

SELECTING LOCATION

CAUTION: This Unit is intended for indoor installation *only. Do not* install this Unit in an outdoor environment which would expose it to the outside elements.

IMPORTANT: For the most efficient operation of the Unit, the ambient operating temperature for the Unit should not exceed 90° F. Satisfactory temperatures may be obtained using blowers, air conditioning, etc. Check your local codes.

NOTE: For identification purposes, the side of the unit that the dispensing valves are on is designated "front" of unit.

The Unit may be moved from one location to another and be set up to dispense cold pre-mix carbonated drinks. Locate the Unit so the following requirements are satisfied.

IMPORTANT: When moving the C-750 Mobile Unit from one location to another, *do not* tilt the Unit more than 45° to prevent water leakage caused by splashing of water in the water tank.

A Water Tank Seal Kit (P/N 308979000) is available for these Units which closes off the top of the water tank to eliminate or reduce water loss caused by splashing during mobile movement of the Unit.

1. The Unit *must* be located near a properly fused and grounded electrical outlet with proper electrical requirements (see Unit nameplate for electrical requirements).
2. The Unit *must* be located on a flat level surface and *must* stand solidly. Unit *should* be located in a shaded area for better cooling efficiency.

CAUTION: ALLOW A MINIMUM 12-INCH CLEARANCE (TO NEAREST OBSTRUCTION) AROUND ALL SIDES OF THE UNIT.

3. Air circulation required for cooling the condenser coil is drawn in through air intake grille on front and is exhausted out through grilles on sides and back of the Unit. When locating Unit, make sure grilles are not restricted (12-inch clearance to nearest obstruction) to ensure proper air circulation through the Unit.

ELECTRICAL REQUIREMENTS

DANGER: To avoid possible fatal shock or serious injury to the Operator, it is *highly reccomende*d that a GFCI (ground fault circuit interrupt) be installed in the electrical circuit for the 115 VAC, 60 Hz Units. *It is required* that an ELCB (earth leakage circuit breaker) be installed in the electrical circuit for the 230 Vac, 50 Hz Units.

Locate the Unit near a properly grounded electrical outlet with proper electrical requirements. The electrical circuit *must* be properly fused (slow-blow type fuse) or the circuit *must* be connected through an equivalent HACR circuit breaker. The electrical outlet *must* be accessible for ease of connecting or disconnecting the Unit power cord. No other electrical appliance should be connected to this circuit. *ALL ELECTRICAL WIRING MUST CONFORM TO NATIONAL AND LOCAL ELECTRICAL CODES.*

LOCATING THE UNIT

1. Locate the Unit on a flat level surface so that the Unit sits solidly.

2. The Unit should be located in a shaded area for better cooling efficiency.
3. The Unit should be close to a grounded electrical outlet with proper electrical requirements (see Unit nameplate for electrical requirements).

DRAIN CONNECTIONS

(see Figure 3)

Drip Tray Drain Hose - The DRIP TRAY, as provided, is a closed container and must be emptied periodically. If permanent drain is desired, cut out center of drain connection on drip tray. Be sure to remove all plastic to open drain to its maximum inside diameter, eliminating any rough edges which will trap dirt. Install DRIP TRAY (item 3) by inserting rear edge of tray under lip of valve trim panel and lifting up until bottom tray supports are inserted in square holes provided in front panel. Lock drip tray in place by a light downward pressure. Connect drain hose below drip tray to drain connection on drip tray. This drain hose runs to inside of Unit and *must* be routed out through hole in back of the Unit and *must* be placed in a waste container.

Water Tank Drain Hose - A drain hose, connected to the bottom of the water tank, is provided to drain water from the tank. Hose clamp and plug in end of drain hose should be removed only when desired to drain the tank. This drain hose may be routed out through the hole in back of the Unit to a floor drain or to a waste container when draining the tank.

Water Tank Overflow Tube - Water tank overflow tube may be routed out through the hole in back of the Unit. Plug in end of overflow tube should be removed only when ice water bath is being replenished and during initial forming of a new ice bank.

FILL WATER TANK AND START REFRIGERATION SYSTEM

(see Figure 3)

1. Make sure plug is secure in end of water tank drain hose.
2. Pull release latch on front of the top cover, then lift hinged top cover up into open position.
3. Route Unit product inlet lines coiled in top of Unit, out through the hole in back of Unit.
4. Fill Unit water tank with water as follows:
   A. Remove plug from end of water tank overflow tube.
   B. Remove water fill hole plug.
   C. Fill water tank with water until water starts flowing from water tank overflow tube. *USE LOW-MINERAL-CONTENT WATER WHERE A LOCAL WATER PROBLEM EXISTS.*

      Do not install plug in end of water tank overflow tube until full ice bank has been formed, as ice expansion will raise water level in the water tank.
   D. Install water fill hole plug.
5. Pull release latch on front of the top cover, then lower hinged top cover into closed position. Release latch to secure top cover in locked position.

WARNING: The Unit must be electrically grounded to prevent possible fatal electrical shock or serious injury to operator. The Unit power cord is equipped with a three-prong plug. If a three-hole (grounded) electrical outlet is not available, use an approved method to ground the Unit.

6. **115 VAC, 60 Hz Units only**– Make sure the main power switch, located on the back of the Unit, is in the "OFF" (down) position. Plug Unit power cord into electrical outlet, then place the main power switch in the "ON" position.

   230 VAC, 50 Hz Unit– Plug Unit power cord into electrical outlet.

   The compressor, condenser fan motor, and agitator motor will start and begin forming an ice bank. When a full ice bank has been formed, the compressor and condenser fan motor will stop but the agitator motor will continue to operate circulating ice water bath in the water tank. Water will continue to drip from the water tank overflow tube until a full ice bank has been formed, then the tube may be removed from the waste container and stored inside the unit.

7. Install plug in end of water tank overflow tube.

INSTALLING PRODUCT TANKS QUICK DISCONNECTS ON UNIT PRODUCT INLET LINES

(see Figure 2)

NOTE: The numbered Unit product inlet lines are labeled to identify the dispensing valves they serve. For example: Line labeled "1" must be connected to the product tank that provides product to be dispensed from the No. 1 dispensing valve. (No. 1 dispensing valve is the valve on the right side when facing front of the Unit).

If applicable, ADAPTER FITTINGS (item 1) may be used to lengthen the Unit product inlet lines to locate product tanks remote from the Unit.

All Unit product inlet lines internal connections have been made at the factory. Install product tanks liquid quick disconnects on ends of the Unit product inlet lines.

INSTALLING PRIMARY CO_2 REGULATOR ASS'Y AND CONNECTING PRODUCT TANKS CO_2 LINES TO REGULATOR

(see applicable Figure 2)

WARNING: CO_2 displaces oxygen. Strict attention *must* be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

WARNING: To avoid personal injury and/or property damage, always secure CO_2 cylinder in upright position with a safety chain to prevent it from falling over. Should the shutoff valve become accidentally damaged or broken off, CO_2 cylinder can cause serious personal injury.

1. Position CO_2 cylinder in upright position and secure with safety chain.
2. Install primary CO_2 regulator on CO_2 cylinder. *MAKE SURE NYLON WASHER IS INSIDE REGULATOR ASSEMBLY COUPLING NUT BEFORE INSTALLING ON CO_2 CYLINDER.*
3. Connect made up product tanks CO_2 lines to check valves in primary CO_2 regulator assembly outlet manifold. Seal connections with tapered white gaskets.
4. Install product tanks gas quick disconnects on ends of product tanks CO_2 lines. CO_2 lines should be labeled for identification as to which product tanks they serve.

INSTALLING DISPENSING VALVE KNOBS

(see Figure 3)

Install KNOBS (item 2) on dispensing valves by pushing knobs down into place on the valve's levers.

INSTALLING DISPENSING VALVE DECAL KIT

Install DECAL KIT, DISPENSING VALVES KNOBS (item 6) on the dispensing valve's knobs.

INSTALLING 5-INCH PLAQUES ON SIDES OF UNIT

If applicable, install PLAQUES, (item 5) on both sides of the Unit.

INSTALLING DRIP TRAY AND CUP REST ON UNIT

Install DRIP TRAY (item 3) on the Unit, then install CUP REST (item 4) in the drip tray.

PREPARING UNIT FOR OPERATION

CAUTION: Before opening CO_2 cylinder shutoff valve, turn primary CO_2 regulator adjusting screw to the left (counterclockwise) until all tension is relieved from adjusting screws spring.

WARNING: CO_2 displaces oxygen. Strict attention *must* be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

1. Open (counterclockwise) CO_2 cylinder shutoff valve slightly to allow lines to slowly fill with gas, then open valve fully to back-seat valve. (Back-seating valve prevents leakage around valve shaft.)
2. Adjust product tank primary CO_2 regulator as instructed in the SERVICE AND MAINTENANCE Section.
3. Connect product tanks into product systems. Check for leaks and tighten any loose connections.

UNIT OPERATION

1. Dispense from each dispensing valve until air is purged from systems and until product is dispensed.
2. Check for leaks and repair if evident.
3. Adjust dispensing valves for dispensed product flow rate as instructed in the SERVICE AND MAINTENANCE Section.

THIS PAGE LEFT BLANK INTENTIONALLY

OPERATORS INSTRUCTIONS

This section covers operating controls, daily pre-operation check, Unit operation, adjustments, replenishing CO_2 and product supplies, cleaning and sanitizing the Unit, checking the condenser coil for restrictions, and checking the ice water bath.

IMPORTANT: Only qualified Personnel should service internal components of the Unit.

CAUTION: This Unit is intended for indoor installation *only. Do not* install this Unit in an outdoor environment which would expose it to the outside elements.

IMPORTANT: For the most efficient operation of the Unit, the ambient operating temperature for the Unit should not exceed 90° F. Satisfactory temperatures may be obtained using blowers, air conditioning, etc. Check your local codes.

WARNING: The Unit must be electrically grounded to avoid possible fatal electrical shock or serious injury to the operator. The Unit power cord is equipped with a three-prong plug. If a three-hole (grounded) electrical outlet is not available, use an approved method to ground the Unit.

PREPARING UNIT FOR SHIPPING OR RELOCATING

CAUTION: Before shipping, relocating, or storing the Unit, all product coils *must* be sanitized and all sanitizing solution *must* be purged from the coils. Ice bank *must* be melted and all water drained from the water tank. A freezing ambient environment will cause residual water remaining inside the Unit to freeze resulting in damage to internal components.

OPERATING CONTROLS

(see Figure 3)

DISPENSING VALVE LEVER

Hold cup or glass under dispensing valve. Pull dispensing valve lever forward and dispense until cup or glass is full, then release lever.

UNIT POWER SWITCH (115 VAC, 60 Hz units only)

Unit power switch, located on back of Unit, must be in “ON” (up) position before Unit will operate.

DAILY PRE-OPERATION CHECK

1. Make sure CO_2 cylinder primary CO_2 regulator assembly 1800-psi gage indicator is not in shaded (“change CO_2 cylinder”) portion of dial. If so, CO_2 cylinder is almost empty and must be replaced.
2. Ensure sufficient product supply is in all product tanks. If not, replenish product supply as instructed in the SERVICE AND MAINTENANCE section.
3. Make sure drip tray is clean and clean cup rest is in place in drip tray.

UNIT OPERATION

1. Make sure Unit power switch (115 VAC, 60 Hz Units only), located on back of Unit, is in “ON” (up) position.

2. Hold cup or glass under dispensing valve. Pull dispensing valve lever forward and dispense until cup or glass is full, then release lever.

ADJUSTMENTS

ADJUSTING PRODUCT TANKS PRIMARY CO_2 REGULATOR

Product tanks primary CO_2 regulator should be periodically checked for proper pressure settings and if necessary, adjusted as instructed in the SERVICE AND MAINTENANCE section.

ADJUSTING DISPENSING VALVES PRODUCT FLOW RATE

Product flow rate of the dispensing valves should be periodically checked and if necessary, adjusted as instructed in the SERVICE AND MAINTENANCE section.

REPLENISHING CO_2 SUPPLY

WARNING: CO_2 displaces oxygen. Strict attention *must* be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

When indicator on CO_2 cylinder primary CO_2 regulator assembly 1800-psi is in shaded ("change CO_2 cylinder") portion of the dial, CO_2 cylinder is almost empty and should be changed. CO_2 supply should be checked daily and if necessary, replenished as instructed in the SERVICE AND MAINTENANCE section.

REPLENISHING PRODUCT SUPPLY

Product supply should be checked daily and if necessary, replenished as instructed in the SERVICE AND MAINTENANCE section.

CLEANING AND SANITIZING

DAILY CLEANING OF UNIT

Daily cleaning of Unit should be performed at end of daily operation as instructed in SERVICE AND MAINTENANCE section.

SANITIZING UNIT

Product systems should be sanitized every 90-days as instructed in the SERVICE AND MAINTENANCE section.

CHECKING DROP-IN REFRIGERATION ASSEMBLY CONDENSER COIL FOR RESTRICTIONS

NOTE: Circulating air, required to cool condenser coil, is drawn in through air intake grille on front and is exhausted out through grilles on sides and back of the Unit. Restricting air circulation through the Unit will decrease its cooling efficiency.

Area in front, sides and back of Unit must be kept free of obstructions which would prevent air flow in and out of the Unit. A minimum of 12-inches all-around clearance (12-inch clearance to nearest obstruction) is required. The Unit condenser coil should be periodically cleaned as instructed in the SERVICE AND MAINTENANCE section to maintain cooling efficiency of the Unit.

CHECKING ICE WATER BATH

A “gurgle” heard from the Unit indicates water level in the water tank is low and more water should be added for maximum product cooling as instructed in the SERVICE AND MAINTENANCE section.

CLEANING CO_2 GAS CHECK VALVES

(see Figure 2 and 5)

The CO_2 gas check valves *must* be inspected and serviced at least once a year under normal conditions and after any CO_2 system servicing or disruption as instructed in the SERVICE AND MAINTENANCE section.

SERVICE AND MAINTENANCE

This section describes service and maintenance procedures to be performed on the Unit.

IMPORTANT: Only qualified personnel should service internal components or electrical wiring.

WARNING: Disconnect electrical power from the Unit to prevent personnel injury before attempting any internal maintenance. Only qualified personnel should service the internal components or electrical wiring.

CAUTION: This Unit is intended for indoor installation *only. Do not* install this Unit in an outdoor environment which would expose it to the outside elements.

IMPORTANT: For the most efficient operation of the Unit, the ambient operating temperature for the Unit should not exceed 90° F. Satisfactory temperatures may be obtained using blowers, air conditioning, etc. Check your local codes.

PREPARING UNIT FOR SHIPPING, RELOCATING, OR STORING

CAUTION: Before shipping, relocating, or storing the Unit, all product coils *must* be sanitized and all sanitizing solution *must* be purged from the coils. Ice bank *must* be melted and all water drained from the water tank. A freezing ambient environment will cause residual water remaining inside the Unit to freeze resulting in damage to internal components.

TOP COVER, ACCESS GRILLES, AND DRIP TRAY REMOVAL

(see Figure 3)

OPENING HINGED TOP COVER

Pull release latch on front of top cover, then lift hinged top cover up into open position.

ACCESS GRILLE REMOVAL

Remove screws securing access grille on Unit, then remove grille.

DRIP TRAY REMOVAL

1. Disconnect drain hose from bottom of drip tray.
2. Lift drip tray up slightly, and at same time, tip front of drip tray up to disengage its bottom supports from square holes in the Unit front panel. Slide drip tray down to disengage its upper rear edge from under valve trim panel lip.
3. Install drip tray on Unit by reversing removal procedure.

PERIODIC INSPECTION

1. Check Unit condenser coil for accumulation of dust, lint, and grease which will restrict air flow through the condenser coil. Restricting air flow through the condenser coil will decrease Unit cooling efficiency.

2. Check area in front, sides, and back of Unit for obstructions. These areas must be kept clear at all times which would prevent air flow in and out of the Unit. An all-around minimum clearance of 12-inches (12-inch clearance to nearest obstruction) *must* be maintained.

3. Check dispensing valves for dripping that indicates leaking and repair as necessary.

ADJUSTMENTS

ADJUSTING PRODUCT TANKS PRIMARY CO_2 REGULATOR

(see Figure 2)

NOTE: To readjust primary CO_2 regulator to a lower setting, loosen adjusting screw lock nut, then turn screw to the left (counterclockwise) until pressure gage reads 5-psi lower than new setting will be. Turn adjusting screw to the right (clockwise) until gage registers new setting, then tighten lock nut.

Set product tanks primary CO_2 regulator, using IMI Cornelius Inc; PRE-MIX COMPUTER slide rule or bottling room chart, at equilibrium pressure for highest temperature encountered between product tank storage area and the Unit plus 5-psig operating pressure for lines 10-feet in length or less and no vertical lift. Add one pound for every 10-feet over initial 10-feet of product tank-to-the Unit line length and one pound for every 2-feet of vertical lift. Add one pound for every product tank on line over three tanks. *MAXIMUM UNIT INLET PRESSURE MUST NOT EXCEED 100-PSIG.* Loosen lock nut on CO_2 cylinder adjusting screw, then turn adjusting screw to the right (clockwise) until gage registers desired pressure. Tighten adjusting screw lock nut.

ADJUSTING DISPENSING VALVES PRODUCT FLOW RATE

Turn dispensing valve Compensator Adjusting Screw (see Figure 3) to the left (counterclockwise) for higher product flow rate or to the right (clockwise) for lower product flow rate.

REPLENISHING CO_2 SUPPLY

WARNING: CO_2 displaces oxygen. Strict attention *must* be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

NOTE: When indicator on CO_2 cylinder primary CO_2 regulator assembly 1800-psi gage is in shaded ("change CO_2 cylinder") portion of dial, CO_2 cylinder is almost empty and should be replaced.

1. Fully close (clockwise) CO_2 cylinder valve.

2. Slowly loosen primary CO_2 regulator assembly coupling nut allowing CO_2 pressure to escape, then remove regulator assembly from empty CO_2 cylinder.

3. Unfasten safety chain and remove empty CO_2 cylinder.

WARNING: To avoid personal injury and/or property damage, *always* secure CO_2 cylinder IN UPRIGHT POSITION WITH A SAFETY CHAIN TO PREVENT IT FROM FALLING OVER. Should valve become accidentally damaged or broken off, CO_2 cylinder can cause serious personal injury.

4. Position CO_2 cylinder and secure with safety chain.

5. Make sure gasket is in place inside primary CO_2 regulator assembly coupling nut, then install regulator on CO_2 cylinder.

6. Open (counterclockwise) CO_2 cylinder valve slightly to allow lines to slowly fill with gas, then open valve fully to back-seat valve. (Back-seating valve prevents leakage around valve shaft).

7. Check CO_2 connections for leaks. Tighten any loose connections.

REPLENISHING PRODUCT SUPPLY

1. Remove inlet (CO_2) disconnect (grey) and outlet disconnect (black) from empty product tank, then remove tank.

2. Place full product tank in position, then connect inlet (CO_2 disconnect (grey) and outlet disconnect (black) to the tank.

PRODUCT FLAVOR CHANGE

Sanitize applicable product system as instructed, then install full tank of new flavor product.

CLEANING REFRIGERATION SYSTEM CONDENSER COIL

(see Figures 3 and 4)

NOTE: Circulating air required to cool condenser coil is drawn in through grille on front and is exhausted out through grilles on sides and back of the Unit. Restricting air circulation through Unit will decrease its cooling efficiency.

Excessive accumulation of dust, lint, and grease on condenser coil will restrict air flow through the coil and cause a loss of cooling efficiency. Perform the following procedure to clean the condenser coil.

1. **115 VAC, 60 Hz Units only**– Place Unit main power switch, located on the back of the Unit, in the "OFF'' (down) position.

   230 VAC, 50 Hz Unit– Unplug Unit power cord from electrical outlet.

2. Remove screws securing grille on front panel, then remove grille.

3. Vacuum or use soft brush to clean the condenser coil. If available, use low-pressure compressed air.

4. Install grille on Unit front panel and secure with screws.

5. **115 VAC, 60 Hz Units only**– Place Unit main power switch, located on the back of the Unit, in the "ON" (up) position.

   230 VAC, 50 Hz Unit– Plug Unit power cord into electrical outlet.

CHECKING ICE WATER BATH

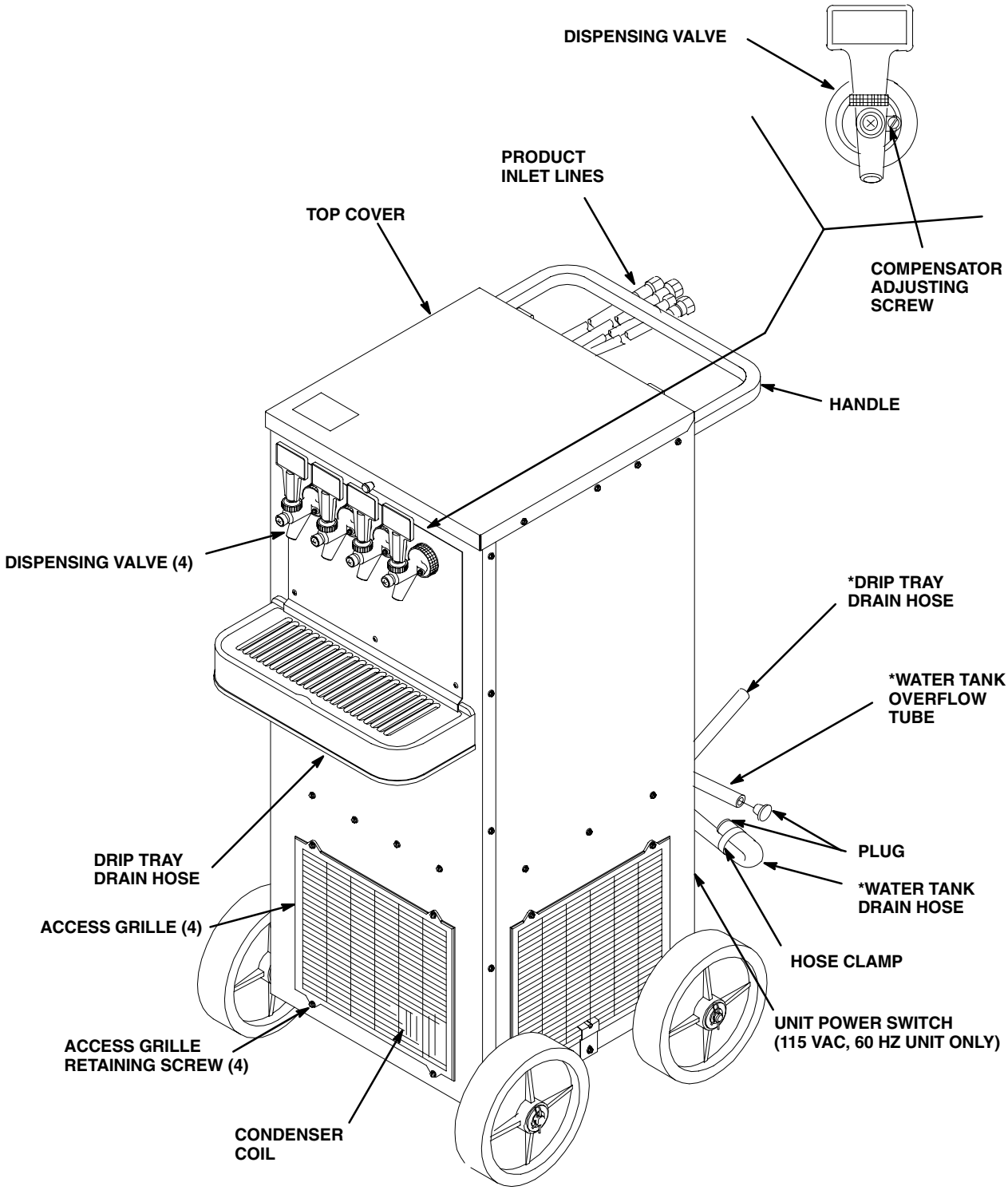
(see Figures 3 and 4)

A "gurgle'' heard from Unit indicates water level in water tank is low and more water should be added for maximum product cooling. Before adding more water, ice water bath and ice bank should be checked for cleanliness and agitator motor shaft and ice bank sensing bulb should be checked for excessive mineral deposit build-up.

1. **115 VAC, 60 Hz Units only**– Place Unit main power switch, located on the back of the Unit, in the "OFF'' (down) position.

   230 VAC, 50 Hz Unit– Unplug Unit power cord from electrical outlet.

2. Pull release latch on front of top cover, then lift hinged top cover up into open position.



*WATER TANK OVERFLOW TUBE, WATER TANK DRAIN HOSE, AND DRIP TRAY DRAIN HOSE MAY BE ROUTED OUT THROUGH HOLE IN BACK OF UNIT

FIGURE 3. PARTS IDENTIFICATION (FOUR-FLAVOR UNIT SHOWN)

3. Check condition of the ice water bath and the ice bank. The ice water bath should be clear and the ice bank should be free of foreign particles.

4. Check agitator motor shaft and the ice bank control sensing bulb for excessive mineral deposit build-up.

5. If cleaning of water tank is necessary, proceed to CLEANING WATER TANK in this section.

6. Fill water tank with water up to top of stainless steel product coils. *USE LOW-MINERAL- CONTENT WATER WHERE A LOCAL WATER PROBLEM EXISTS.*

7. Pull release latch on front of top cover, then lower hinged top cover into closed position. Release latch to secure top cover in locked position.

8. **115 VAC, 60 Hz Units only**– Place Unit main power switch, located on the back of the Unit, in the "ON" (up) position.

   230 VAC, 50 Hz Unit– Plug Unit power cord into electrical outlet.

CLEANING WATER TANK

(see Figures 3 and 4)

NOTE: Ice water bath should be changed as often as necessary to keep water tank clean. A convenient time to perform this operation is at the time the Unit is being sanitized. To save time, water can be drained from the water tank while unit is being sanitized.

1. **115 VAC, 60 Hz Units only**– Place Unit main power switch, located on the back of the Unit, in the "OFF'' (down) position.

   230 VAC, 50 Hz Unit– Unplug Unit power cord from electrical outlet.

2. Pull release latch on front of top cover, then lift hinged top cover up into open position.

3. Remove screws securing either side or back access grille, then remove grille.

4. Route water tank drain hose out through removed access grille to waste receptacle or drain. Remove hose clamp and plug from drain hose and allow water to drain from water tank.

NOTE: If ice bank is clear and contains no foreign particles, it does not have to be melted down. Skip steps 5 and 6 and proceed to step 7.

5. If ice bank is dirty, allow it to melt. Hot water may be used to speed melting.

> **CAUTION: Never use an ice pick or other instrument to remove ice from evaporator. Such practice can result in punctured refrigerant circuit or damage to tank.**

6. Wash inside of water tank with a mild soap solution.

7. Use a fiber brush and carefully clean mineral deposit build-up from agitator motor shaft and ice bank sensing bulb.

8. Rinse all parts and flush out water tank with clean water.

9. Install plug in drain hose, then fold end of drain hose over and install hose clamp.

10. Place drain hose back inside the Unit.

11. Install grille and secure with screws.

12. Fill water tank (if no ice bank is present) with approximately 10-gallons of water up to top of stainless steel product coils. *USE LOW-MINERAL-CONTENT WATER WHERE A LOCAL WATER PROBLEM EXISTS.*

13. Remove plug from end of water tank overflow tube, then route tube to drain or waste container.

14. **115 VAC, 60 Hz Units only**– Place Unit main power switch, located on the back of the Unit, in the "ON" (up) position. Make sure compressor, condenser fan motor, and agitator motor are operating.

    230 VAC, 50 Hz Unit– Plug Unit power cord into electrical outlet.

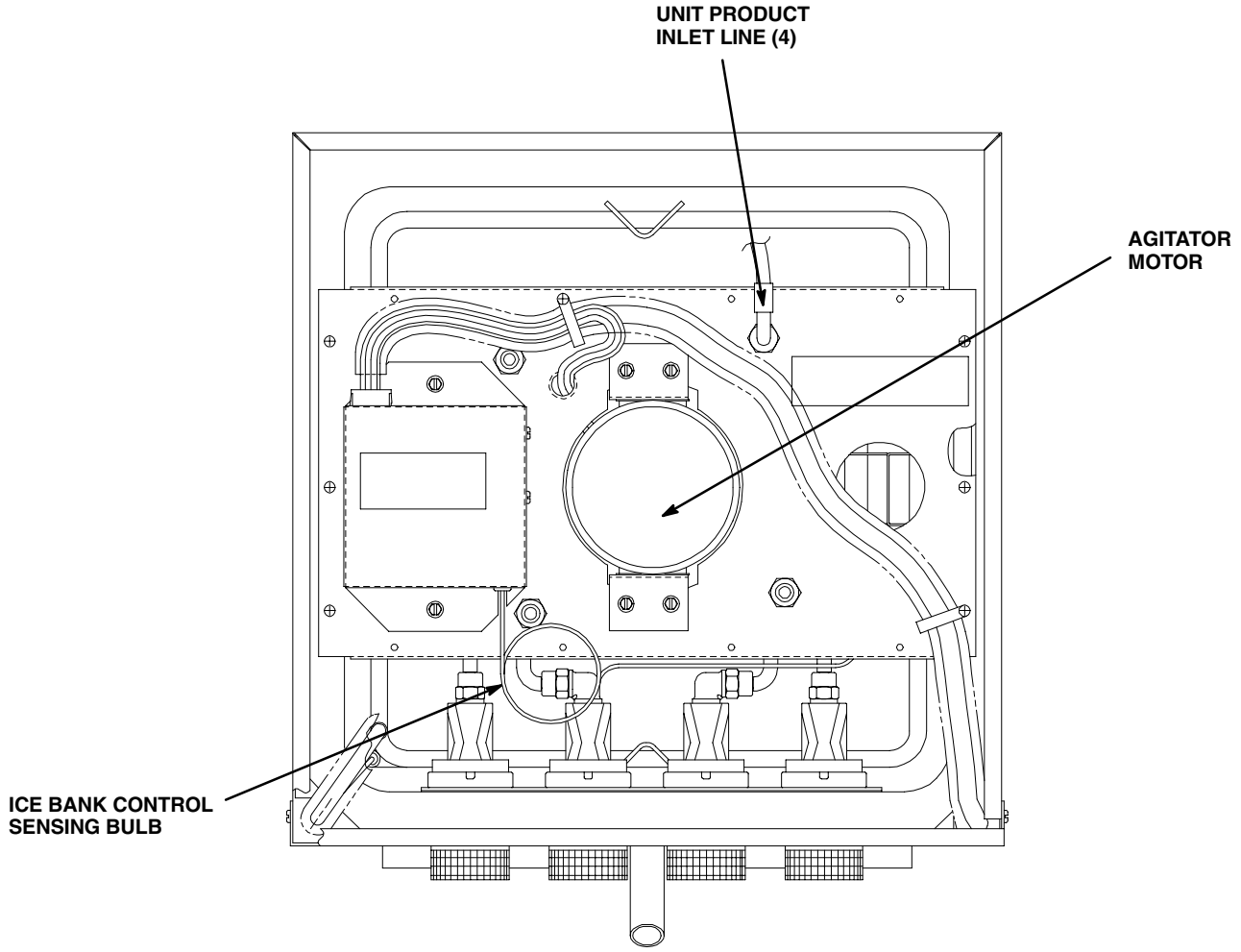


FIGURE 4. WATER TANK (FOUR-FLAVOR UNIT SHOWN)

15. Pull release latch on front of top cover, then lower hinged top cover into closed position. Release latch to secure top cover in locked position.

16. Install plug in end of water tank overflow tube after ice bank has been formed and refrigeration system has cycled off.

CLEANING

DAILY CLEANING OF UNIT

Rinse out sponge with clean water, then wring excess water out of sponge. Wipe off external surfaces of Unit, then wipe Unit dry with a clean soft cloth. *DO NOT USE ABRASIVE CLEANERS.*

DAILY CLEANING OF DRIP TRAY

1. Lift drip tray up slightly and at the same time, tip front of drip tray up to disengage its bottom supports from square holes in Unit front panel. Slide drip tray down to disengage its upper rear edge from under valve trim panel lip.

2. Remove cup rest from drip tray. Wash cup rest and drip tray, then rinse them with clean water.

3. Install cup rest in drip tray, then install drip tray on Unit front panel by reversing removal procedure.

CLEANING AND SANITIZING

DAILY CLEANING OF UNIT

NOTE: A drip tray that does not have a drain hose routed to a waste container or a permanent drain *must* be removed from the Unit and be thoroughly cleaned. A drip tray that has a drip tray drain hose routed to a waste container or a permanent drain may be cleaned in place on the Unit as follows.

4. Remove cup rest from the drip tray.

5. Wash drip tray in place on the Unit, then rinse drip tray with hot water allowing water to drain out through the drain hose.

6. Wash cup rest, then rinse the cup rest with clean water. Install cup rest in drip tray.

7. Clean all external surfaces of the Unit with a sponge. Rinse out the sponge with clean water, then wring excess water out of the sponge and wipe off all external surfaces of the Unit. Wipe Unit dry with a clean soft cloth. DO NOT USE ABRASIVE-TYPE CLEANERS.

SANITIZING PRE-MIX SYSTEMS

IMPORTANT: Only qualified Service Personnel should perform sanitizing procedure on the pre-mix product systems.

The pre-mix product systems should be sanitized every 90-days using a non-scented household liquid bleach such as Hi-Lex or Chlorox containing a 5.25% sodium hypochlorite concentration. Proceed as follows to sanitize the pre-mix product systems.

1. Disconnect product tanks from the product systems.

2. Rinse product tanks quick disconnects with warm potable water.

3. Using a clean empty product tank, prepare a full tank of non-scented liquid dishwasher detergent solution by using 70° F (21° C) to 100° F (38° C) potable water and 0.5 oz. (15 ml) of liquid dishwasher detergent (such as Joy, Ivory, etc.) to one gallon of potable water. Shake tank containing detergent solution to thoroughly mix the solution.

4. Connect tank containing detergent solution into one of the product systems.

5. Place waste container under the applicable dispensing valve.

6. Activate the dispensing valve to permit detergent solution to purge product out of the line, coil, and the dispensing valve. Continue to dispense until only detergent solution is dispensed from the dispensing valve.

7. Connect tank containing detergent solution into remaining product systems and flush product out of systems as instructed in steps 5 and 6 preceding.

8. Using a clean product tank, prepare sanitizing solution using 70° F (21° C) to 100° F (38° C) potable water and 0.5 oz. (15 ml) of household liquid bleach such as non-scented Hi-Lex or Chlorox that contains a 5.25 % sodium hypochlorite concentration to one gallon of potable water. This mixture *must* not exceed 200 PPM of chlorine. Shake tank containing sanitizing solution to thoroughly mix the solution.

9. Connect tank containing sanitizing solution into one of the product systems.

10. Place waste container under the applicable dispensing valve.

11. Activate the dispensing valve for one minute to purge detergent solution from and install sanitizing solution in the product system.
12. Continue activating the dispensing valve in cycles (“ON” for 15–seconds, “OFF”, then “ON” for 15-seconds). Repeat “ON” and “OFF” cycles for 15 cycles.
13. Repeat steps 9 through 11 preceding to purge detergent solution from the remaining product systems.
14. Allow sanitizing solution to remain in the product system for not less than 10-minutes or for no more than 15-minutes.
15. Connect product tank containing potable water into the product system to be flushed.

WARNING: Flush sanitizing solution from the system(s) as instructed. Residual sanitizing solution left in the product system(s) could create a health hazard.

16. Place waste container under applicable dispensing valve.
17. Activate the dispensing valve for one minute to purge all sanitizing solution out of the product system.
18. Continue activating the dispensing valve in cycles (“ON” for 15–seconds, “OFF”, then “ON” for 15-seconds). Repeat “ON” and “OFF” cycles for 15 cycles.
19. Repeat steps 15 through 18 preceding to purge sanitizing solution from the remaining product systems.
20. Remove product tank containing flush water from the product system, then connect a clean empty product tank into the system.
21. Place waste container under applicable dispensing valve.
22. Activate the dispensing valve to purge all water from the product system.
23. Repeat steps 20 and 22 preceding to purge all water from the remaining product systems.
24. Dispose of waste sanitizing solution in a sanitary sewer, not in a storm drain, then thoroughly rinse the inside and the outside of the container that was used for sanitizing solution to remove all sanitizing solution residue.

CLEANING CO_2 GAS CHECK VALVES

(see Figures 2 and 5)

The primary CO_2 regulator assembly CO_2 gas check valves must be inspected and serviced at least once a year under normal conditions and after any servicing or disruption of the CO_2 system. *ALWAYS REPLACE QUAD RING SEAL EACH TIME GAS CHECK VALVES ARE SERVICED.*

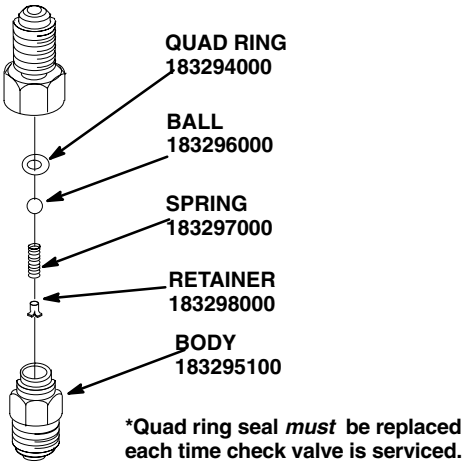


FIGURE 5. CO_2 GAS CHECK VALVE

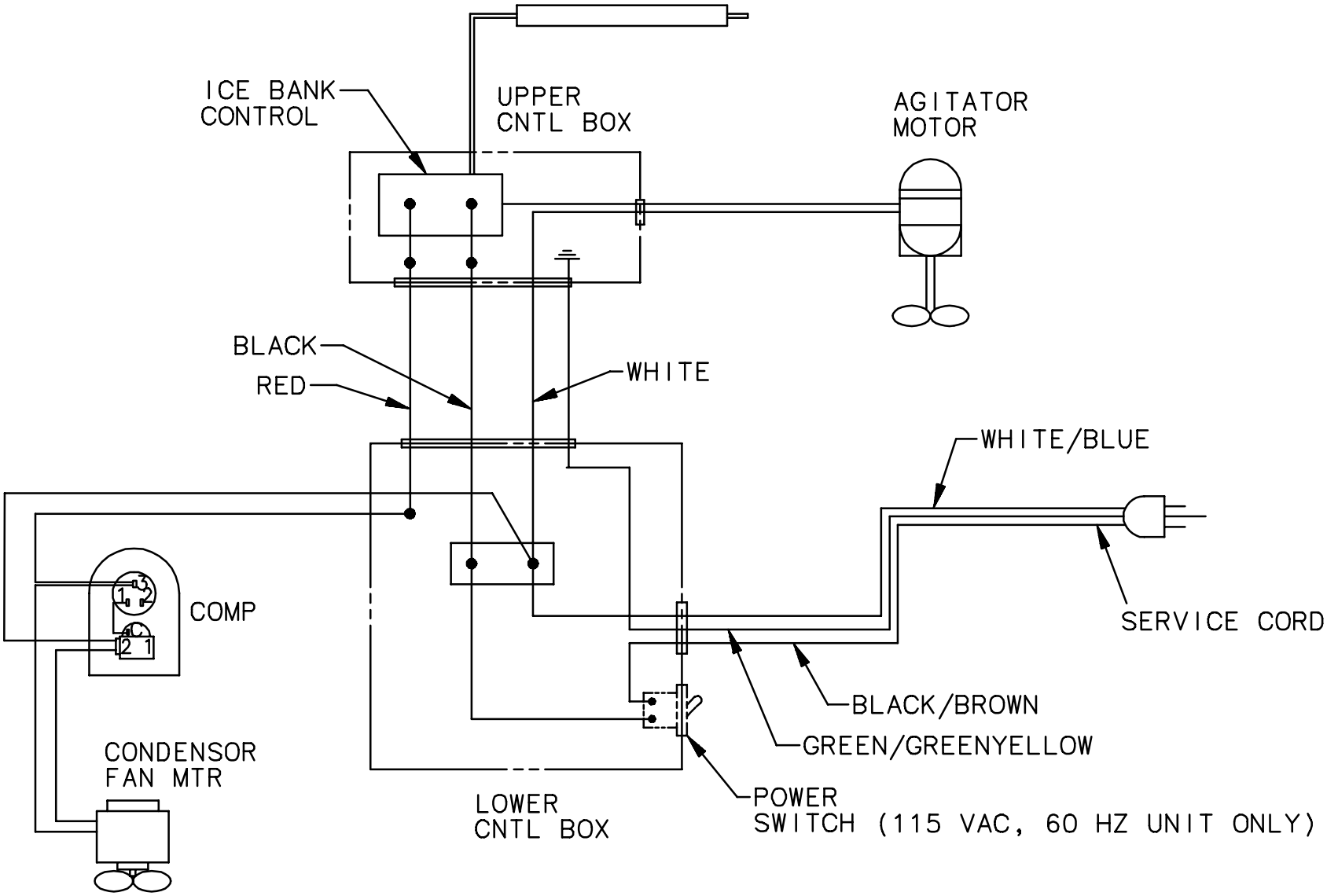


FIGURE 6. WIRING DIAGRAM

TROUBLESHOOTING

IMPORTANT: Only qualified personnel should service internal components or electrical wiring.

WARNING: Disconnect electrical power to Unit before attempting any electrical repairs to internal components. If repairs are to be made to the product systems, shut off CO_2 supply, disconnect product tanks, and bleed systems pressures before proceeding.

TROUBLESHOOTING PRODUCT SYSTEM

Trouble	Probable Cause	Remedy
NO PRODUCT DISPENSED.	A. Product tank quick disconnects not attached properly.	A. Attach quick disconnects securely.
	B. No product supply (product tank empty).	B. Replenish product supply as instructed.
	C. No CO_2 supply.	C. Replenish CO_2 supply as instructed.
DISPENSED PRODUCT COMES OUT OF DISPENSING VALVE CLEAR BUT FOAMS IN CUP OR GLASS.	A. Oil film or soap scum in cups or glass.	A. Use clean cups or glasses.
	B. Ice used for finished drink is sub-cooled.	B. Do not use ice directly from freezer. Allow ice to become “wet” before using. (Refer to following **NOTE**).
NOTE: Crushed ice also causes dispensing problems. When dispensed drink hits sharp edges of ice, carbonation is released from dispensed drink.		
DISPENSED PRODUCT FOAMS AS IT LEAVES DISPENSING VALVE.	A. Recovery rate of refrigeration system exceeded (ice bank depleted).	A. Allow ice bank to recover.
	B. Product tanks primary CO_2 regulator adjusted too high.	B. Adjust product tanks primary CO_2 regulator to proper equilibrium pressure as instructed, then replace product supply.
	C. Dispensing valve restricted or dirty.	C. Sanitize product system as instructed.
	D. Tapered nylon washer inside tube swivel nut connection distorted from being overtightened restricting product flow.	D. Replace nylon washer. Make sure it is properly seated.
	E. Oil, water, or dirt in CO_2 supply.	E. Remove contaminated CO_2. Clean CO_2 system (lines, regulators, etc.). Install clean CO_2 supply.

Trouble	Probable Cause	Remedy
TROUBLESHOOTING REFRIGERATION SYSTEM		
COMPRESSOR DOES NOT OPERATE.	A. Ice bank sufficient.	A. Refrigeration not called for.
	B. Unit power cord unplugged or Unit power switch (115 VAC Unit only) in “OFF’’ (down) position.	B. Plug in power cord or place power switch in “ON” (up) position.
COMPRESSOR DOES NOT OPERATE (CONT’D)	C. No power source (blown fuse or tripped circuit breaker).	C. Replace fuse or reset circuit breaker. (Note: Fuse or circuit breaker are not part of unit).
	D. Low voltage at compressor terminals.	D. Voltage must be at least 103 volts (115 VAC Unit) or 208 volts (230 VAC Unit) at compressor terminals when compressor is trying to start.
	E. Loose, disconnected, or broken wiring.	E. Tighten connections or replace broken wiring.
	F. Overload protector cut out; over-heated compressor. Condenser fan motor not operating as required.	F. Compressor will cool enough to restart. Do not overdraw cooling capacity of Unit. Refer to “CONDENSER FAN MOTOR NOT OPERATING’’ in this section.
	G. Inoperative overload protector or start relay.	G. Replace inoperative part.
	H. Inoperative ice bank control.	H. Replace ice bank control.
	I. Inoperative compressor.	I. Replace compressor.
COMPRESSOR WILL NOT STOP AFTER SUFFICIENT ICE BANK IS FORMED. (NOTE-ICE BANK SHOULD JUST COVER CONTROL BULB).	A. Ice bank control cap tube kinked or broken.	A. Replace ice bank control.
	B. Ice bank control stuck in closed position.	B. Replace ice bank control.
COMPRESSOR OPERATES CONTINUOUSLY BUT DOES NOT FORM SUFFICIENT ICE BANK.	A. Cooling capacity is exceeded by over-drawing.	A. Reduce amount of drinks drawn per given time.
	B. Unit located in excessively hot area or air circulation through condenser coil is restricted.	B. Relocate Unit or determine and correct condenser coil restriction.
	C. Refrigeration system leak.	C. Repair refrigeration system.
NOTE: Ice bank freezes from bottom of evaporator upward. A refrigerant leak or insufficient charge might show an ice bank at bottom and not at top of evaporator.		
CONDENSER FAN MOTOR NOT OPERATING.	A. Jumper cord loose or disconnected from motor or terminal block. Broken wire in cord.	A. Tighten connections or replace cord.
	B. Fan blade obstructed.	B. Remove obstruction.

Trouble	Probable Cause	Remedy
CONDENSER FAN MOTOR NOT OPERATING. (CONT'D)	C. Inoperative condenser fan motor.	C. Replace condenser fan motor.
NOTE: If overload protector cuts out compressor, condenser fan motor will continue to operate; otherwise troubleshooting condenser fan motor problems is same as for "COMPRESSOR DOES NOT OPERATE" paragraph plus the following:		
AGITATOR MOTOR NOT OPERATING.	A. Unit power cord or agitator motor power cord disconnected or Unit power switch (115 VAC Unit only) in "OFF" position.	A. Plug in power cords or place Unit power switch in "ON" position.
	B. No power source (blown fuse or tripped circuit breaker).	B. Replace fuse or reset circuit breaker. (Note: Fuse or circuit breaker are not part of Unit.)
	C. Agitator motor propeller obstructed.	C. Remove obstruction.
	D. Low voltage.	D. Voltage must be at least 103 volts (115 VAC Unit) or 208 volts (230 VAC Unit) at compressor terminals when compressor is trying to start.
	E. Loose, disconnected, or broken wiring.	E. Tighten connections or replace broken wiring.
	F. Inoperative agitator motor.	F. Replace agitator motor.

WARRANTY

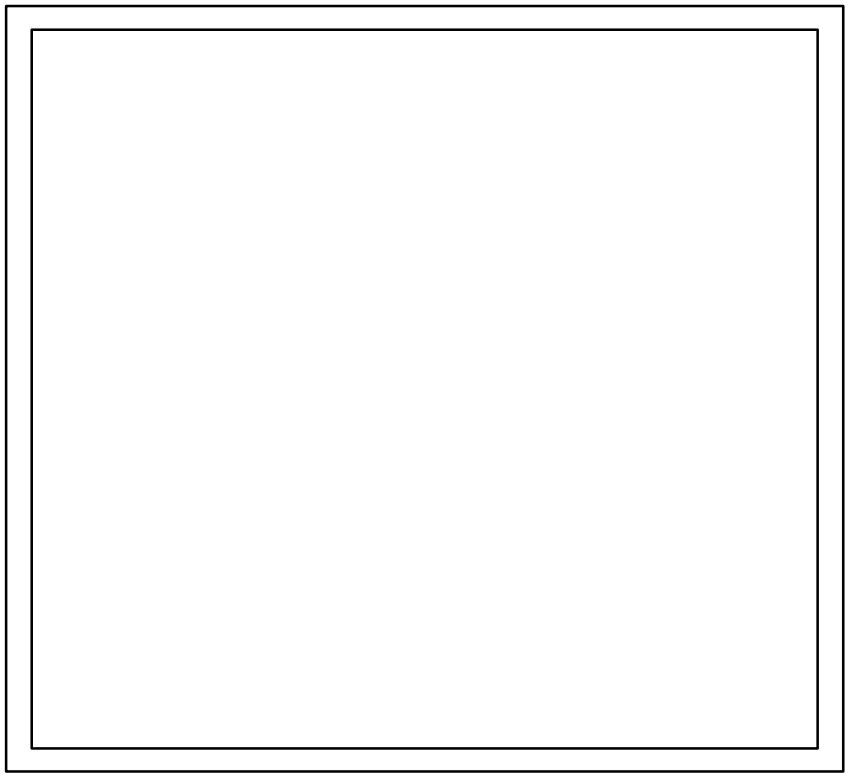
IMI Cornelius Inc. warrants that all equipment and parts are free from defects in material and workmanship under normal use and service. For a copy of the warranty applicable to your Cornelius, Remcor or Wilshire product, in your country, please write, fax or telephone the IMI Cornelius office nearest you. Please provide the equipment model number, serial number and the date of purchase.

IMI Cornelius Offices

AUSTRALIA ● P.O. 210, ● RIVERWOOD, ● NSW 2210, AUSTRALIA ● (61) 2 533 3122 ● FAX (61) 2 534 2166
AUSTRIA ● AM LANGEN FELDE 32 ● A-1222 ● VIENNA, AUSTRIA ● (43) 1 233 520 ● FAX (43) 1-2335-2930
BELGIUM ● BOSKAPELLEI 122 ● B-2930 BRAASCHAAT, BELGIUM ● (32) 3 664 0552 ● FAX (32) 3 665 2307
BRAZIL ● RUA ITAOCARA 97 ● TOMAS COELHO ● RIO DE JANEIRO, BRAZIL ● (55) 21 591 7150 ● FAX (55) 21 593 1829
ENGLAND ● TYTHING ROAD ALCESTER ● WARWICKSHIRE, B49 6 EU, ENGLAND ● (44) 789 763 101 ● FAX (44) 789 763 644
FRANCE ● 71 ROUTE DE ST. DENIS ● F-95170 DEUIL LA BARRE ● PARIS, FRANCE ● (33) 1 34 28 6200 ● FAX (33) 1 34 28 6201
GERMANY ● CARL LEVERKUS STRASSE 15 ● D-4018 LANGENFELD, GERMANY ● (49) 2173 7930 ● FAX (49) 2173 77 438
GREECE ● 488 MESSOGION AVENUE ● AGIA PARASKEVI ● 153 42 ● ATHENS, GREECE ● (30) 1 600 1073 ● FAX (30) 1 601 2491
HONG KONG ● 1104 TAIKOTSUI CENTRE ● 11-15 KOK CHEUNG ST ● TAIKOKTSUE, HONG KONG ● (852) 789 9882 ● FAX (852) 391 6222
ITALY ● VIA PELLIZZARI 11 ● 1-20059 ● VIMARCATE, ITALY ● (39) 39 608 0817 ● FAX (39) 39 608 0814
NEW ZEALAND ● 20 LANSFORD CRES. ● P.O. BOX 19-044 AVONDALE ● AUCKLAND 7, NEW ZEALAND ● (64) 9 8200 357 ● FAX (64) 9 8200 361
SINGAPORE ● 16 TUAS STREET ● SINGAPORE 2263 ● (65) 862 5542 ● FAX (65) 862 5604
SPAIN ● POLIGONO INDUSTRAIL ● RIERA DEL FONOLLAR ● E-08830 SANT BOI DE LLOBREGAT ● BARCELONA, SPAIN ● (34) 3 640 2839 ● FAX (34) 3 654 3379
USA ● ONE CORNELIUS PLACE ● ANOKA, MINNESOTA ● (612) 421-6120 ● FAX (612) 422-3255

LD004
4/21/98

THIS PAGE LEFT BLANK INTENTIONALLY



IMI CORNELIUS INC.

CORPORATE HEADQUARTERS:

One Cornelius Place
Anoka, Minnesota 55303-6234
(612) 421-6120
(800) 238-3600